

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product form	: Substance
Substance name	: Sodium Nitrate
EC-No.	: 231-554-3
CAS-No.	: 7631-99-4
Formula	: NaNO ₃

1.2. Relevant identified uses of the substance or mixture and uses advised against

1.2.1. Relevant identified uses

Use of the substance/mixture	: Laboratory Reagent; Precision Industrial Applications Antimicrobial agent; preservative
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1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

Manufacturer

Jost Chemical Co.
8150 Lackland Rd.
63114 Saint Louis, Missouri
T 314-428-4300 - F 314-428-4366
sds@jostchemical.com - www.jostchemical.com

Distributor

JOST CHEMICAL EUROPE SPRL
rue du Bois Portal n° 30/1-3
B - 5300 Andenne - BELGIQUE
T +32 85-552655 - F +32 85-552654
info@jostchemical.com

1.4. Emergency telephone number

Emergency number	: For Hazardous Materials [or Dangerous Goods] Incident Spill, Leak, Fire, Exposure, or Accident Call CHEMTREC Day or Night United States and Canada: 1-800-424-9300 / +1 703-527-3887 Global: +1 703-741-5970
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SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP] Mixtures/Substances: SDS EU 2015: According to Regulation (EU) 2015/830 (REACH Annex II)

Oxidising Solids, Category 3	H272
Serious eye damage/eye irritation, Category 2	H319
Full text of H statements : see section 16	

Adverse physicochemical, human health and environmental effects

No additional information available

2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms (CLP)



GHS03

GHS07

Signal word (CLP)	: Warning
Hazard statements (CLP)	: H272 - May intensify fire; oxidizer. H319 - Causes serious eye irritation.
Precautionary statements (CLP)	: P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. P220 - Keep away from clothing and other combustible materials. P264 - Wash hands thoroughly after handling. P280 - Wear protective gloves, eye protection, face protection. P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P337+P313 - If eye irritation persists: Get medical advice/attention. P370+P378 - In case of fire: Use media other than water to extinguish. P501 - Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.

2.3. Other hazards

This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII

This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII

Sodium Nitrate

Safety Data Sheet

according to Regulation (EC) No. 453/2010

SECTION 3: Composition/information on ingredients

3.1. Substances

Substance type : Mono-constituent

Name	Product identifier	%
Sodium Nitrate	(CAS-No.) 7631-99-4 (EC-No.) 231-554-3	100

Full text of H-statements: see section 16

3.2. Mixtures

Not applicable

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general	: Check the vital functions. Unconscious: maintain adequate airway and respiration. Respiratory arrest: artificial respiration or oxygen. Cardiac arrest: perform resuscitation. Victim conscious with laboured breathing: half-seated. Victim in shock: on his back with legs slightly raised. Vomiting: prevent asphyxia/aspiration pneumonia. Prevent cooling by covering the victim (no warming up). Keep watching the victim. Give psychological aid. Keep the victim calm, avoid physical strain. Depending on the victim's condition: doctor/hospital. Never give alcohol to drink.
First-aid measures after inhalation	: Remove person to fresh air and keep comfortable for breathing. Remove the victim into fresh air. Respiratory problems: consult a doctor/medical service.
First-aid measures after skin contact	: Rinse with water. Take victim to a doctor if irritation persists. Wash skin with plenty of water.
First-aid measures after eye contact	: Rinse with water. Take victim to an ophthalmologist if irritation persists. Do not apply neutralizing agents. Remove contact lenses, if present and easy to do. Continue rinsing. Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.
First-aid measures after ingestion	: Rinse mouth with water. Immediately after ingestion: give lots of water to drink. Call Poison Information Centre (www.big.be/antigif.htm). Consult a doctor/medical service if you feel unwell. Ingestion of large quantities: immediately to hospital. Call a poison center or a doctor if you feel unwell.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms/effects after inhalation	: AFTER INHALATION OF DUST: Coughing.
Symptoms/effects after skin contact	: Red skin. ON CONTINUOUS EXPOSURE/CONTACT: Methemoglobinemia. Symptoms similar to those listed under ingestion.
Symptoms/effects after eye contact	: Irritation of the eye tissue. Redness of the eye tissue. Eye irritation.
Symptoms/effects after ingestion	: AFTER INGESTION OF HIGH QUANTITIES: Nausea. Vomiting. Abdominal pain. Blood in stool. Methemoglobinemia. Feeling of weakness. Dizziness. Blue/grey discolouration of the skin. Low arterial pressure. Accelerated heart action. Cramps/uncontrolled muscular contractions. Disturbances of consciousness.
Chronic symptoms	: No effects known.

4.3. Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media : Adapt extinguishing media to the environment for surrounding fires. Water spray. Dry powder. Foam.

5.2. Special hazards arising from the substance or mixture

Fire hazard	: DIRECT FIRE HAZARD: Non combustible. INDIRECT FIRE HAZARD: May intensify fire; oxidiser. Reactions involving a fire hazard: see "Reactivity Hazard". May intensify fire; oxidizer.
Explosion hazard	: INDIRECT EXPLOSION HAZARD: Reactions with explosion hazards: see "Reactivity Hazard".
Hazardous decomposition products in case of fire	: On burning: release of toxic and corrosive gases/vapours (nitrous vapours).

5.3. Advice for firefighters

Precautionary measures fire	: Exposure to fire/heat: keep upwind. Exposure to fire/heat: consider evacuation. Exposure to fire/heat: have neighbourhood close doors and windows.
Firefighting instructions	: Cool tanks/drums with water spray/remove them into safety. Dilute toxic gases with water spray. Take account of toxic/corrosive precipitation water.
Protection during firefighting	: Heat/fire exposure: compressed air/oxygen apparatus. Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

Sodium Nitrate

Safety Data Sheet

according to Regulation (EC) No. 453/2010

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

- Protective equipment : Gloves. Protective clothing. Dust cloud production: compressed air/oxygen apparatus. Reactivity hazard: compressed air/oxygen apparatus. Reactivity hazard: gas-tight suit.
- Emergency procedures : Ventilate spillage area. Mark the danger area. Prevent dust cloud formation. No naked flames. Keep containers closed. Wash contaminated clothes. In case of hazardous reactions: keep upwind. In case of reactivity hazard: consider evacuation. No open flames, no sparks, and no smoking. Avoid contact with skin and eyes.
- Measures in case of dust release : In case of dust production: keep upwind. Dust production: have neighbourhood close doors and windows.

6.1.2. For emergency responders

- Protective equipment : Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".

6.2. Environmental precautions

Avoid release to the environment. Prevent spreading in sewers.

6.3. Methods and material for containment and cleaning up

- For containment : Contain released product, pump into suitable containers. Plug the leak, cut off the supply. Dam up the solid spill. Knock down/dilute dust cloud with water spray. If reacting: dilute toxic gas/vapour with water spray. Take account of toxic/corrosive precipitation water.
- Methods for cleaning up : Mechanically recover the product. Prevent dust cloud formation. Scoop solid spill into closing containers. Carefully collect the spill/leftovers. Spill must not return in its original container. Clean contaminated surfaces with an excess of water. Take collected spill to manufacturer/competent authority. Wash clothing and equipment after handling. Notify authorities if product enters sewers or public waters.
- Other information : Dispose of materials or solid residues at an authorized site.

6.4. Reference to other sections

For further information refer to section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

- Precautions for safe handling : Ensure good ventilation of the work station. Avoid raising dust. Keep away from naked flames/heat. Carry operations in the open/under local exhaust/ventilation or with respiratory protection. Comply with the legal requirements. Clean contaminated clothing. Keep the substance free from contamination. Thoroughly clean/dry the installation before use. Do not discharge the waste into the drain. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Wear personal protective equipment. Avoid contact with skin and eyes.
- Hygiene measures : Observe normal hygiene standards. Keep container tightly closed. Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

- Storage conditions : Store in a clean, dry warehouse in the original unopened containers. Store in a well-ventilated place. Keep cool.
- Incompatible materials : Combustible materials.
- Heat and ignition sources : KEEP SUBSTANCE AWAY FROM: heat sources.
- Information on mixed storage : KEEP SUBSTANCE AWAY FROM: combustible materials. oxidizing agents. reducing agents. (strong) acids. cellulosic materials. organic materials. water/moisture.
- Storage area : Store in a dry area. Keep out of direct sunlight. Keep container in a well-ventilated place. Keep only in the original container. Meet the legal requirements.
- Special rules on packaging : SPECIAL REQUIREMENTS: closing. watertight. dry. clean. correctly labelled. meet the legal requirements. Secure fragile packagings in solid containers.
- Packaging materials : SUITABLE MATERIAL: metal. glass. synthetic material. MATERIAL TO AVOID: wood. paper.

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Sodium Nitrate (7631-99-4)

DNEL/DMEL (Workers)

Long-term - systemic effects, dermal	20.8 mg/kg bw/day
Long-term - systemic effects, inhalation	36.7 mg/m ³

Sodium Nitrate

Safety Data Sheet

according to Regulation (EC) No. 453/2010

Sodium Nitrate (7631-99-4)

DNEL/DMEL (General population)

Long-term - systemic effects, oral	12.5 mg/kg bw/day
Long-term - systemic effects, inhalation	10.9 mg/m ³
Long-term - systemic effects, dermal	12.5 mg/kg bw/day

PNEC (Water)

PNEC aqua (freshwater)	0.45 mg/l
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8.2. Exposure controls

Appropriate engineering controls:

Ensure good ventilation of the work station.

Materials for protective clothing:

GIVE EXCELLENT RESISTANCE: nitrile rubber. GIVE GOOD RESISTANCE: butyl rubber. PVC

Hand protection:

Gloves

Eye protection:

Safety glasses. In case of dust production: protective goggles. Safety glasses

Skin and body protection:

Protective clothing

Respiratory protection:

Dust production: dust mask with filter type P2

Environmental exposure controls:

Avoid release to the environment.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Solid
Appearance	: Crystals. Granules.
Molecular mass	: 84.99 g/mol
Colour	: White.
Odour	: Odourless.
Odour threshold	: No data available
pH	: 8 - 9 (100 g/l)
Relative evaporation rate (butylacetate=1)	: No data available
Melting point	: 306 °C
Freezing point	: Not applicable
Boiling point	: 380 °C
Flash point	: Not applicable
Critical temperature	: 1048 °C
Auto-ignition temperature	: Not applicable
Decomposition temperature	: 380 °C
Flammability (solid, gas)	: Non flammable.
Vapour pressure	: No data available
Relative vapour density at 20 °C	: Not applicable
Relative density	: 2.3
Density	: 2261 kg/m ³
Solubility	: Soluble in water. Soluble in ethanol. Soluble in methanol. Soluble in ammonia. Water: 874 g/l Ethanol: 0.8 g/100ml
Log Pow	: -3.8
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available

Sodium Nitrate

Safety Data Sheet

according to Regulation (EC) No. 453/2010

Explosive properties	: No data available
Oxidising properties	: May intensify fire; oxidiser.
Explosive limits	: Not applicable

9.2. Other information

VOC content	: Not applicable (inorganic)
Other properties	: Translucent. Hygroscopic.

SECTION 10: Stability and reactivity

10.1. Reactivity

Reacts violently with many compounds e.g.: with (strong) reducers, with combustible materials and with organic material: risk of spontaneous ignition. Violent to explosive reaction with (some) metal powders and with (strong) oxidizers. At very high temperature: explosive decomposition with oxidation which increases fire hazard. May cause or intensify fire; oxidiser.

10.2. Chemical stability

Hygroscopic.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

Avoid contact with hot surfaces. Heat. No flames, no sparks. Eliminate all sources of ignition.

10.5. Incompatible materials

Combustible materials.

10.6. Hazardous decomposition products

Reacts with (some) acids: release of toxic and corrosive gases/vapours (nitrous vapours).

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity (oral)	: Not classified (Based on available data, the classification criteria are not met)
Acute toxicity (dermal)	: Not classified (Based on available data, the classification criteria are not met)
Acute toxicity (inhalation)	: Not classified (Based on available data, the classification criteria are not met)

Sodium Nitrate (7631-99-4)

LD50 oral rat	3430 mg/kg bodyweight (Equivalent or similar to OECD 401, Rat, Male/female, Experimental value)
LD50 dermal rat	> 5000 mg/kg bodyweight (OECD 402: Acute Dermal Toxicity, 24 h, Rat, Male/female, Read-across)

Causes serious eye damage.	: Not classified (Based on available data, the classification criteria are not met) pH: 8 - 9 (100 g/l)
Serious eye damage/irritation	: Causes serious eye irritation. pH: 8 - 9 (100 g/l)
Respiratory or skin sensitisation	: Not classified (Lack of data)
Germ cell mutagenicity	: Not classified (Lack of data)
Carcinogenicity	: Not classified (Lack of data)
Reproductive toxicity	: Not classified (Lack of data)
STOT-single exposure	: Not classified (Lack of data)
STOT-repeated exposure	: Not classified
Aspiration hazard	: Not classified (Not applicable)
Potential adverse human health effects and symptoms	: Practically non-toxic if swallowed (LD50 oral 2000/5000 mg/kg). Non-toxic in contact with skin (LD50 skin > 5000 mg/kg). Not irritant to skin. Causes serious eye irritation.

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general	: Not classified as dangerous for the environment according to the criteria of Regulation (EC) No 1272/2008.
Ecology - air	: Not included in the list of fluorinated greenhouse gases (Regulation (EU) No 517/2014). Not classified as dangerous for the ozone layer (Regulation (EC) No 1005/2009).
Ecology - water	: Not harmful to crustacea. Not harmful to fishes. Mild water pollutant (surface water). Not harmful to activated sludge. Not harmful to algae. May cause eutrophication.
Dangerous for the environment	: Not classified
Chronic aquatic toxicity	: Not classified

Sodium Nitrate (7631-99-4)

LC50 fish 1	4650 mg/l (Other, 96 h, Salmo gairdneri, Static system, Fresh water, Experimental value)
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Sodium Nitrate

Safety Data Sheet

according to Regulation (EC) No. 453/2010

EC50 Daphnia 1	7240 mg/l (OECD 202: Daphnia sp. Acute Immobilisation Test, 24 h, Daphnia magna, Static system, Fresh water, Experimental value)
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12.2. Persistence and degradability

Sodium Nitrate (7631-99-4)

Persistence and degradability	Biodegradability: not applicable.
Biochemical oxygen demand (BOD)	Not applicable
Chemical oxygen demand (COD)	Not applicable
ThOD	Not applicable
BOD (% of ThOD)	Not applicable

12.3. Bioaccumulative potential

Sodium Nitrate (7631-99-4)

Log Pow	-3.8
Bioaccumulative potential	Not bioaccumulative.

12.4. Mobility in soil

Sodium Nitrate (7631-99-4)

Ecology - soil	No (test) data on mobility of the substance available.
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12.5. Results of PBT and vPvB assessment

Sodium Nitrate (7631-99-4)

This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII
This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII

12.6. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste treatment methods	: Dispose of contents/container in accordance with licensed collector's sorting instructions.
Product/Packaging disposal recommendations	: Do not discharge into surface water. Remove waste in accordance with local and/or national regulations. Hazardous waste shall not be mixed together with other waste. Different types of hazardous waste shall not be mixed together if this may entail a risk of pollution or create problems for the further management of the waste. Hazardous waste shall be managed responsibly. All entities that store, transport or handle hazardous waste shall take the necessary measures to prevent risks of pollution or damage to people or animals. Remove to an authorized dump (Class I). Precipitate/make insoluble.
Additional information	: Hazardous waste according to Directive 2008/98/EC, as amended by Regulation (EU) No 1357/2014 and Regulation (EU) No 2017/997.

SECTION 14: Transport information

In accordance with ADR / RID / IMDG / IATA / ADN

14.1. UN number

UN-No. (ADR)	: 1498
UN-No. (IMDG)	: 1498
UN-No. (IATA)	: 1498
UN-No. (ADN)	: 1498
UN-No. (RID)	: 1498

14.2. UN proper shipping name

Proper Shipping Name (ADR)	: Sodium nitrate
Proper Shipping Name (IMDG)	: Sodium nitrate
Proper Shipping Name (IATA)	: Sodium nitrate
Proper Shipping Name (ADN)	: Sodium nitrate
Proper Shipping Name (RID)	: Sodium nitrate
Transport document description (ADR)	: UN 1498 Sodium nitrate, 5.1, III, (E)
Transport document description (IMDG)	: UN 1498 Sodium nitrate, 5.1, III
Transport document description (IATA)	: UN 1498 Sodium nitrate, 5.1, III
Transport document description (ADN)	: UN 1498 Sodium nitrate, 5.1, III
Transport document description (RID)	: UN 1498 Sodium nitrate, 5.1, III

Sodium Nitrate

Safety Data Sheet

according to Regulation (EC) No. 453/2010

14.3. Transport hazard class(es)

ADR

Transport hazard class(es) (ADR) : 5.1

Danger labels (ADR) : 5.1



IMDG

Transport hazard class(es) (IMDG) : 5.1

Danger labels (IMDG) : 5.1



IATA

Transport hazard class(es) (IATA) : 5.1

Hazard labels (IATA) : 5.1



ADN

Transport hazard class(es) (ADN) : 5.1

Danger labels (ADN) : 5.1



RID

Transport hazard class(es) (RID) : 5.1

Danger labels (RID) : 5.1



14.4. Packing group

Packing group (ADR) : III

Packing group (IMDG) : III

Packing group (IATA) : III

Packing group (ADN) : III

Packing group (RID) : III

14.5. Environmental hazards

Dangerous for the environment : No

Marine pollutant : No

Other information : No supplementary information available

14.6. Special precautions for user

Overland transport

Transport regulations (ADR) : Subject

Classification code (ADR) : O2

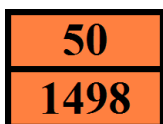
Sodium Nitrate

Safety Data Sheet

according to Regulation (EC) No. 453/2010

Hazard identification number (Kemler No.) : 50

Orange plates :



Tunnel restriction code (ADR) : E

Transport by sea

Transport regulations (IMDG) : Subject

EmS-No. (Fire) : F-A

EmS-No. (Spillage) : S-Q

Air transport

Transport regulations (IATA) : Subject to the provisions

Inland waterway transport

Classification code (ADN) : O2

Carriage permitted (ADN) : B

Rail transport

Transport regulations (RID) : Subject

Classification code (RID) : O2

14.7. Transport in bulk according to Annex II of Marpol and the IBC Code

Not applicable

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

15.1.1. EU-Regulations

No REACH Annex XVII restrictions

Sodium Nitrate is not on the REACH Candidate List

Sodium Nitrate is not on the REACH Annex XIV List

VOC content : Not applicable (inorganic)

Directive 2012/18/EU (SEVESO III)

15.1.2. National regulations

Listed on the United States TSCA (Toxic Substances Control Act) inventory

Listed on the Canadian DSL (Domestic Substances List)

15.2. Chemical safety assessment

No chemical safety assessment has been carried out

SECTION 16: Other information

Indication of changes:

This sheet was updated (refer to the date at the top of this page).

Full text of H- and EUH-statements:

Eye Irrit. 2	Serious eye damage/eye irritation, Category 2
Ox. Sol. 3	Oxidising Solids, Category 3
H272	May intensify fire; oxidizer
H319	Causes serious eye irritation.

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product